

**COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY**

**SECOND SET OF INFORMATION REQUESTS TO
THE BERKSHIRE GAS COMPANY
D.T.E. 05-7**

Pursuant to 220 C.M.R. § 1.06(6)(c), the Department of Telecommunications and Energy (“Department”) submits to The Berkshire Company (“Berkshire” or “Company”) the following Information Requests:

INSTRUCTIONS

1. Each request should be answered in writing on a separate, three-hole punch page with a recitation of the request, a reference to the request number, the docket number of the case and the name of the person responsible for the answer.
2. Do not wait for all answers to be completed before supplying answers. Provide the answers as they are completed. Further, these requests shall be deemed continuing so as to require further supplemental responses if the or its witness receives or generates additional information within the scope of these requests between the time of the original response and the close of the record in this proceeding.
3. The term “provide complete and detailed documentation” means:

Provide all data, assumptions and calculations relied upon. Provide the source of and basis for all data and assumptions employed. Include all studies, reports and planning documents from which data, estimates or assumptions were drawn and support for how the data or assumptions were used in developing the projections or estimates. Provide and explain all supporting work-papers.
4. The term “document” is used in its broadest sense and includes, without limitation, writings, drawings, graphs, charts, photographs, phono-records, microfilm, microfiche, computer printouts, correspondence, handwritten notes, records or reports, bills, checks, articles from journals or other sources and other data compilations from which information can be obtained and all copies of such documents that bear notations or other markings that differentiate such copies from the original.
5. If any one of these requests is ambiguous, notify the Hearing Officer so that the request may be clarified prior to the preparation of a written response.

6. Please serve copies of the responses as follows: one (1) copy of the responses to Mary Cottrell, Secretary of the Department and on all parties; one (1) copy of the responses to Michael Killion, Hearing Officer, on three-hole punch paper; three (3) copies of the responses to Andréas Thanos, Gas Division.

INFORMATION REQUESTS

- DTE-2-1 Please refer to pages 38 through 42 of the Company's filing. Explain how each pipeline and regional supply project change "will have a direct impact on Berkshire's customers" and how the Company plans to take advantage of these changes in the next five years.
- DTE-2-2 Please refer to page 44 of the Company's filing. Explain in what context and by what means did the Company seek input from marketers and how this input affected the Company's contract decisions. Include any evidence of such communication.
- DTE-2-3 Please answer the following:
- (a) Discuss the ways by which the Company continually monitors the market and evaluates resource options to maintain an optimal, least-cost and reliable resource portfolio.
 - (b) Detail the process by which the Company solicits proposals for incremental and replacement resources.
 - (c) Discuss how the Company evaluates and monitors the "minimum impact upon the environment" condition as stated on page 33 of the Company's filing.
- DTE-2-4 Please rank, in order of importance, the various price and non-price factors which the Company takes into consideration when making decisions regarding the replacement of its various gas supply and transportation capacity contracts. Provide reasons for the rankings.
- DTE-2-5 Please answer the following:
- (a) How many of the Company's existing commodity contracts contain no load loss provisions? Also, please provide this information in terms of units of gas.
 - (b) If applicable, please identify in a tabular format the MDQ and the per unit commodity cost for all of the Company's existing commodity supply contracts that have no load loss provisions for each of the next five years.

- (c) In qualitative and quantitative terms and for each of the next five years, please describe the weighted average commodity cost of gas (WACCOG) impact the Company's existing gas purchase contracts (with no load loss provisions) will have on captive firm customers. Within this response, please identify the Company's migration assumptions.

DTE-2-6 In a tabular form,

- (a) Please provide a total figure, expressed in MMBtus/day, that represents the long-haul capacity the Company is currently entitled to transport from the west (i.e., from the Gulf of Mexico);
- (b) Provide a total figure, expressed in MMBtus/day, that represents the short-haul capacity the Company is currently entitled to transport from the west (i.e., from central Pennsylvania and New York);
- (c) Provide a total figure, expressed in MMBtus/day, that represents the capacity the Company is currently entitled to transport from Western and Eastern Canada; and
- (d) How does the Company's total contracted pipeline capacity relate to its supply resources?

DTE-2-7 Please provide a table that indicates, for each supply resource contract, the elements or conditions that provide for the necessary degree of reliability needed to maintain the Company's supply reliability. Indicate those elements of the contract that provide for supply flexibility.

DTE-2-8 Provide a table that indicates, for each supply resource contract, how that contract fits into the Company's efforts to assure supply diversity.

DTE-2-9 For each long-term gas supply, transportation capacity, and storage contract discussed in the Company's filing, please provide, in a tabular form, the following information:

- (a) date the contract was entered into
- (b) the duration and date of expiration of the contract
- (c) the date that the contract was filed for Department review
- (d) docket number
- (e) the date the Department issued a decision.

DTE-2-10 Please discuss the recall right provisions imposed by Berkshire for each of the Company's capacity release transactions in the past five years, if any.

DTE-2-11 Please indicate the number of firm sales customers that are dual-fuel capable and the annual volumes associated with these customers.

- DTE-2-12 Please provide a list of all firm transportation customers on the Company's system. Indicate how many of these customers' upstream capacity requirements are provided by the Company, as part of the mandatory capacity assignment.
- DTE-2-13 Please refer to pages 65 and 66 of the Company's filing.
- (a) Discuss the decision-making process that the Company engages in when purchasing gas for storage during the off-peak season.
 - (b) Include in the discussion a list of all factors that the Company considers when determining the appropriate amount and price at which gas is procured for injection as well as the factors which determine the timing of injection and withdrawal of gas from storage.
 - (c) Show graphically, and on a monthly basis, the amount of gas that the Company injected or withdrew from storage for each of the past five years.
 - (d) Show graphically, and on a monthly basis, the amount of gas that the Company withdrew from storage for each of the past five years expressed as a percentage of the Company's total sendout for each month.
 - (e) Discuss whether or not futures and options may be helpful tools in procuring gas for storage.
- DTE-2-14 Please refer to pages 65 and 66 of the Company's filing. For each of the storage facilities in Berkshire's portfolio, provide a narrative of any restrictions (seasonal or otherwise) that affect the level of gas injections or withdrawals.
- DTE-2-15 Please answer the following:
- (a) Explain whether the Company used any risk management tools, financial or physical, in the past five years to mitigate gas price volatility? If the answer is in the affirmative, how successful were they?
 - (b) If the answer to (a) is negative, explain why, highlighting any problems and/or difficulties in the use of risk management tools.
 - (c) Does the Company plan to use any risk management tools in the next five years to reduce gas price volatility? If the answer is in the affirmative, explain the Company's choice of risk management tools. If the answer is negative, explain why.
- DTE-2-16 Please refer to pages 9 and 10 of the Company's filing.
- (a) Provide figures showing the load reductions resulting from the implementation of the Company's DSM and other conservation programs in the past five years by customer class.
 - (b) How much of the forecasted increases in demand in the next five years

can be met with demand-side management programs?

- (c) Compare the costs and environmental impacts of DSM, relative to meeting demand with increased levels of other resources.

- DTE-2-17 Please discuss the cost implications of and variance between forecasted sendout and actual sendout in the Company's last forecast and supply plan.
- DTE-2-18 Please refer to page 58 of the Company's filing. Explain how certain, in probability terms, the Company is that "[t]here would also be approximately 16,650 Mcf of marketer pipeline gas flowing during a cold snap." In your response, discuss any contingency plans that the Company has in place to serve customers' needs during a cold snap in case all or some of the 16,650 Mcf of marketer pipeline gas is not realized.
- DTE-2-19 Please explain whether Berkshire had any problems with regard to the timely delivery of marketer pipeline gas in the past five years. In your response, list the marketers involved, the frequency of non-delivery of gas, the total volumes involved in each occurrence, the effect on service reliability, and how the Company handled each situation.
- DTE-2-20 Please refer to page 70 of the Company's filing. Provide a map of the Company's distribution system indicating the locations of the Company's peaking propane plants.
- DTE-2-21 Please refer to pages 70 of the Company's filing. Provide a table showing actual annual sendout data from each of the Company's propane plants for the last five years and the projected sendout from each propane plant in each of the forecast years.
- DTE-2-22 Please develop an integrated cost of propane as delivered to the utility's distribution system per MMBtu for each of the last five years. With the cost of delivered propane as a base, please provide a chart relating annual average costs of propane expressed as \$/MMBtu to other peaking and storage options for each of the last five years.
- DTE-2-23 Please refer to page 71 of the Company's filing. Explain how the construction of the LNG storage and vaporization facility in Whately has contributed to the Company's goal of "Least Cost Supply Strategy."
- DTE-2-24 Please discuss any promotional activities or programs that the Company undertook in the past five years to increase growth on its system. Discuss how successful these activities or programs were. Also discuss any promotional activities or programs that the Company plans to undertake in the next five years

to increase growth on its system.

DTE-2-25 ____ What price does city gate natural gas have to reach in order to make LNG a profitable alternative resource for base-load supplies?

- DTE-2-26 Please refer to page 58 of the Company's filing. The Company states that it "is confident in its ability to serve its customers in an extended cold snap."
- (a) Please explain the difference, if any, between a cold snap and an extended cold snap.
 - (b) Please explain whether the Company has had problems serving customers' needs during a cold snap or an extended cold snap in the past 20 years.
 - (c) Please provide a statistically derived confidence interval for the Company's "ability to serve its customers in an extended cold snap."
- DTE-2-27 Please discuss any major problems that the Company has had in serving customers in the past five years during peak and off-peak periods and how the Company resolved those problems.
- DTE-2-28 Please answer the following:
- (a) Please provide the dates during the past five years when Berkshire interrupted gas service to any of its firm supply customers.
 - (b) Identify the customer groups that were interrupted, length of service interruption, and provide a rationale for interruption.
 - (c) Identify any interruptible customers and quasi-firm transportation customers that continued to receive gas supplies during these interruptible periods. Also, list the volume of gas taken by each of these customer types during this period on a monthly basis.
- DTE-2-29 Please indicate whether the Company made any spot gas purchases in the past five years. With regard to the Company's purchase of spot gas, discuss:
- (a) the volume of spot purchases the Company has made over the past five years.
 - (b) how the Company determines what quantity of gas to purchase on the spot market and how it selects vendors.
 - (c) the source of these purchases.
 - (d) the percentage of total gas purchases the Company made that was spot purchases over the past five years. Please explain what factors determined these percentages.
 - (e) the point of purchase of spot gas (i.e., the wellhead or the city-gate).
 - (f) the advantages and disadvantages of purchasing spot gas at both the

- wellhead and the city-gate.
- (g) the Company's inherent ability to maintain low cost gas at the targeted standards of reliability.
- (h) the effects of a significant rise in spot prices (ten percent increase, 25 percent increase, 50 percent increase) on the Company's CGAC.
- (i) please provide a chart reflecting the commodity price paid by Berkshire for each commodity contract in the past one, two, three, four, and five years.
- (j) whether the purchases occurred during the heating or non-heating season.

DTE-2-30 Please discuss, in relation to the design of the Company's supply portfolio:

- (a) the advantages and disadvantages of short-term contracts versus long-term contracts for gas supplies, transportation, and storage to the Company and its customers.
- (b) the advantages and disadvantages of short-term contracts versus spot market purchases of gas supplies to the Company and its customers.
- (c) the advantages and disadvantages of long-term contracts versus spot market purchases of gas supplies to the Company and its customers.
- (d) the tools and mechanisms that the Company employs to monitor and assess the market for supplies, transportation, and storage.
- (e) how effective have the tools and mechanisms that the Company uses to monitor the market been in the past five years?

DTE-2-31 Regarding the Company's forecast and supply planning process:

- (a) Please provide figures showing the number of heating oil customers, and the total gas volumes involved, that the Company successfully converted to gas heating within the past 5 years.
- (b) Also provide figures showing the number of heating oil customers, and the total gas volumes involved, that converted to gas heating by themselves within the past five years.
- (c) Finally, provide figures showing the number of heating oil customers, and the total gas volumes involved, that the Company plans to convert to gas heating within the next five years.

DTE-2-32 Please quantify what natural gas volumes are assumed to be shifted to third-party marketers by customer class of trade for each of the forecast years.

DTE-2-33 Please indicate whether the Company is considering purchasing surplus gas from another LDC, including other Energy East Companies, during the five-year forecast period.

- DTE-2-34 Please identify and comment on all major factors which could develop during the forecast period that could materially affect natural gas availability, reliability or costs to the end-users.
- DTE-2-35 Please identify the steps in the Company's resource acquisition process. Detail the process involved when the Company solicits the marketplace for incremental and replacement resources.
- DTE-2-36 Please submit a copy of the Company's standard (or most recent) RFP for pipeline commodity. Please refer to the RFP and discuss (1) how it meets the Company's supply strategy and (2) how it helps the Company meet its planning goals and objectives.
- DTE-2-37 Please describe how the Company ensures that it continually evaluates resource options that are available on the market. Describe the evaluation process.
- DTE-2-38 How does the Company foresee the effects of customer migration and reverse migration by class during the forecast period? Does this forecast correspond to past experience for each class?
- DTE-2-39 Please refer to page 42 of the Company's filing. Please discuss of the Company's obligations towards grandfathered transportation customers who return to the Company's sales/default service. Refer to Bay State Gas Company, D.T.E. 02-75 in your discussion.
- DTE-2-40 Please update the G-22 tables in the Company's filing to include the total maximum volumes available to the Company (MDQs), including pipeline and local production, under the Company's existing contractual agreements.
- DTE-2-41 Please update Table G-23 in the Company's filing to include the total maximum volumes available to the Company (MDQs), including pipeline and local production, under the Company's existing contractual agreements.
- DTE-2-42 Please provide figures (showing the source of the figures) for any new industrial plants and commercial enterprises (and their capacities in terms of energy use) within the Company's service area in the past five years.
- DTE-2-43 Please provide figures (showing the source of the figures) for any new industrial plants and commercial enterprises (and their capacities in terms of energy use) that have been licensed or approved for construction within the Company's service area in the next five years.

- DTE-2-44 Please provide a narrative description explaining the way Berkshire makes its daily and monthly gas purchase decisions.
- DTE-2-45 Please refer to page 3 of the NAC report. What is the basis for the ten percent accuracy estimate for wind speed information and one-half percent accuracy estimate for temperature data?
- DTE-2-46 Please provide a history of the wind recording instrument: when was it installed, was it purchased new, what is the manufacturer's estimate of accuracy, and why has the wind recording instrument never been calibrated?
- DTE-2-47 Please refer to page 9 of the MAC study. Please discuss how the Company plans to act upon MAC's recommendations regarding validation of the wind speed data.
- DTE-2-48 Please refer to Exhibit 3 to the MAC study. Confirm whether the y-axis represents miles per hour.
- DTE-2-49 Please refer to pages 4-5 of the Company's filing. Since the source of Exhibit 1 is unknown and MAC recommends use of the EDD formula over estimating EDD on the basis of the graph in Exhibit 1, please explain the purpose of the exercise of interpolating wind speed on the basis of the graph in Exhibit 1.
- DTE-2-50 Please refer to page 29 of the Company's filing. Did the design standard survey performed by Boston Gas Company ask the surveyed companies for historical data on HDD and EDD within their service areas?
- DTE-2-51 Please refer to page 9 of the MAC report. The effective degree days in Exhibit 9 and the heating degree days in Exhibit 8 indicate that the EDDs range from 4 percent to 6 percent greater than the HDDs, please provide evidence showing how this EDD/HDD relationship compares to the relative size of EDDs and HDDs in other LDC's service territories.
- DTE-2-52 Please refer to page 3 of the MAC study, where it states that the Company's records on effective degree day data date back to 1986. Please reconcile this statement with footnote 6, on page 7 of the MAC study, where it indicates that the Company maintains a log of wind speed, but not the degree day adder.
- DTE- 2-53 Please refer to page 13 of the MAC study. Please recreate Schedule 8, as included in Appendix B, using the actual wind speeds measured in Pittsfield for the full 18-year period, rather than using calculated wind speeds for the first 16 years.

- DTE-2-54 Please refer to page 12 of the MAC study. What is the source of the 43-year EDD data used in reaching the observation that the recommended ten-day cold snap of 661 EDDs is, with the exception of February 1979, greater than any other 10-day cold snap occurring since 1951?
- DTE-2-55 Please provide printouts of the source data behind the county-specific GDP figures given in Table 5.2.2.
- DTE-2-56 Please provide a complete description of the background of “Economy.com,” including the ownership and management structure of the party that controls the website, the source of its data, the methodologies, inputs, and assumptions behind calculation of county-specific GDP figures, as well as an explanation of why the Company considers this data reliable and relevant.
- DTE-2-57 Please explain the rationale for equating a county’s population taking service from the Company to the portion of the county-wide GDP that is dependent on supply of natural gas. Provide evidence to support the Company’s response.
- DTE-2-58 Please discuss the rationale for including GDP figures in the development of the Company’s design weather standards.
- DTE-2-59 Please provide in digital format the spreadsheets contained in Tables 5.2.1, 5.2.2, and 6.2.1.
- DTE-2-60 Please provide all data and supporting calculations used derive the standard deviation, probability of outages, recurrence probability, and equivalent days of interruption in Tables 5.2.1 and 6.2.1.
- DTE-2-61 Please refer to section 5.2 of the AEG study. Explain why AEG performed a cost/benefit analysis to select a design-year standard based on heating degree days, rather than effective degree days. Also, indicate how the results of the cost/benefit analysis would have been different had AEG performed the analysis on the basis of effective degree days.

